

the former plant, and arranged in corymbs, but a trifle larger. The fruits are not medlars.

Branch No. 3.—The base is simply whitethorn, but the extremity is practically like Branch No. 2.

Similar cases are instanced by M. Jouin, who puts down the now celebrated *Cytisus adami* as having arisen in the way that the branches above described have done.

Drosera Hybrids—This paper, by Prof. Macfarlane, has already appeared in the publications of the University of Pennsylvania; it deals with the structure of a batch of natural hybrids. It may be noted that several instances of what the author has called bi-sexual hybridity occur in the plants considered (p. 248); for instance, instead of finding structures intermediate between the elongated glandular hairs of *Drosera filiformis* and the sessile two-celled glands of *D. intermedia*, both appear on the calyx of the hybrid between them. This fact calls forth some interesting speculations of a cytological nature, which the Professor hopes to see verified. As showing the growing opinion in favour of graft hybrids being realities, it might be mentioned that *Cytisus adami* is referred to as such in the paper.

The Influence of each Parent.—From experiments with cereals and Bromeliaceæ, Dr. Wittmack concludes that "the mother has the more influence upon the habit; the father the more upon the inflorescence; at least, upon its colour." The contrary opinion of M. Duval is given, who also holds that to reduce the volume of the plant the larger must be fertilised by the small parent species. According to Mr. Tropp, the same holds good usually, but not always, with orchids.

Principles.—The laws given by Herr Max Leichtlin may be quoted in full:—

- (1) The female parent gives to the offspring the form and shape of the flowers; also certain qualities.
- (2) The male parent gives more or less of the colouring of the flowers, and if it be richer and blooms more freely than the female, this property is transferred to the offspring.
- (3) Artificially produced offspring give larger flowers than either of their parents.
- (4) The more distant the habitats of the species intended to hybridise, the more difficult is it for them to be fertilised with each other's pollen.
- (5) The offspring becomes infertile and delicate if the form of the flowers of their parents is widely different in shape and outline.

Breeding Staple Food Plants.—In alluding to the cost in labour and money of developing hybrids when the immense number of plants that should be dealt with are used, Prof. Willett Hays points to the importance of selecting carefully the parental individuals. The best flower, he says, too, should be chosen from the best part of the plant.

An Improved Variety of Crocus Sativus.—It was not till after many experiments with examples from many places that the saffron could be got to produce seed, except very meagrely (compare the remarks already made on self-sterilising above). After a wild plant of *Crocus graecus* was obtained from the island of Syra, as much seed as was wanted was obtained. In the variety produced by M. Chappellier there is a proliferation of stigmas, sometimes thirty, and even bracts and sheaths have been converted into them.

Experiments with Dioscorea.—In an attempt to obtain a tuber which was short enough for one to dig up easily, a plant was obtained by M. Chappellier bearing both male and female flowers. This worker also contributes a note on *Mirabilis*.

Hybrid Lilacs.—M. E. Lemoine sends an account of how he proved the Varin lilac to be a hybrid between *Syringa persica laciniata* and *S. vulgaris*, a piece of work which M. Henry would also have succeeded in if his plants had not died before flowering.

Hybrid Clematis are dealt with by M. Morel and Mr. Jackman. M. Duval treats of *Anthurium scherzerianum*, of Bromeliads and of Gloxinias. This hybridist points out how important it is to know the pedigree of plants experimented with, and says that the male parent should be most carefully selected, as being the one whose influence greatly preponderates. Mr. Meehan and Mr. Smythe have written a few general notes. Mr. Weekes has a little to say about Chrysanthemums, while Mr. James Lye, when discussing the cross-fertilisation of the *Fuchsia*, states that he uses the tip of a squirrel's tail to transfer the pollen, and prefers muslin bags to those made of paper for enclosing the chosen blossoms.

Mr. Wilks, the secretary of the Royal Horticultural Society, must be complimented upon the successful production of the report. WILFRED MARK WEBB.

OUR NORTHERN BIRDS.¹

MR. DIXON is a prolific writer, and confines himself almost entirely to one subject. Nevertheless he always succeeds in interesting his readers, and contrives to say something fresh even upon such a trite and thread-



FIG. 1.—Rough-legged Buzzard (From Dixon's "Among the Birds in Northern Shires.")

bare theme as British birds. In a former volume Mr. Dixon took as his subject "Bird-life in a Southern County"; and in the present work he dwells on the great difference between the bird-fauna of the more northern counties of England and Scotland from that of the south

¹ "Among the Birds in Northern Shires." By Charles Dixon. Pp. x + 303. (London and Glasgow: Blackie and Son, 1900.)

of England. Not only are many of the birds of the northern districts normally strangers to the south, either at one season of the year or at all times, but notable differences in their habits are observable. Species, for instance, that sing during winter in the south are silent at that season further north; while others that are permanent residents in the former area are migratory in the latter. And it is certain that from an ornithological point of view the northern counties are more interesting than the southern—and more especially the south-western counties.

In the treatment of his subject, Mr. Dixon has acted wisely in abandoning a systematic classification in favour of a grouping by means of "station," so that we have chapters on the birds of the upland streams, of the moors, the mountains, the heaths and marshes, the forests and copses, the farm and the garden, the river and pool, the sea and the beach, and the crag and sea-cliff. By this arrangement a much more discursive and "chatty" style of writing is permissible than would otherwise have been the case. The reader is accordingly spared a repetition of the descriptions of the various species of which we

out that it occurs in a work published as far back as 1771, and a later issue of which was actually edited by the learned professor himself!

An especial feature of all the author's works is his own practical experience of birds in their native haunts; and all who have had bird-nesting adventures in their own early days will read with delight the description, on p. 136, of his ascent of a lofty oak to secure a clutch of buzzard's eggs, which were safely carried down. In making friends, during his youthful days, with both poachers and game-keepers, Mr. Dixon seems indeed to have had an almost unique experience, and one whereby his practical acquaintance with the ways of birds was largely augmented. He has many stories to tell of the wanton manner in which he has known keepers fire into the nests of brooding birds and otherwise inflict destruction on what they are pleased to denominate "vermin." In regard to these latter, he urges (p. 151) that our indigenous native game-birds would thrive all the better if hawks, crows, magpies, owls and the like were left unmolested. The pheasant, he thinks, however, might not fare so well; but, he adds in effect, perish the pheasant! This, how-

ever, we venture to suggest, is scarcely a practical way of looking at things. If pheasant-preserving were to be given up, our coverts would not be guarded at all, and many of the other birds would be ten times worse off than they are under the present régime.

Not the least interesting chapter in a very interesting book is the final one on bird migration in the northern counties, where, instead of a learned discussion on the theory of migration, we have an actual account of the manner in which the swarms of autumn and spring migrants reach and leave our coasts. Here the author remarks that the short-eared owl and the woodcock frequently reach the Wash together, making the passage from the Continent during the same night, although the one just skims the water while the other flies high in the air. And many other passages attest the author's close observation of the movements of birds. It is to be wished, however, that he would employ the familiar name hedge-sparrow in place of the pedantic hedge-accentor. The term sparrow, as Prof. Newton remarks, was probably originally applied to all our smaller birds; and it is surely an unwarrantable assumption on the part of ornithologists to traverse popular usage

and attempt its restriction to the members of the restricted genus *Passer*.
R. L.

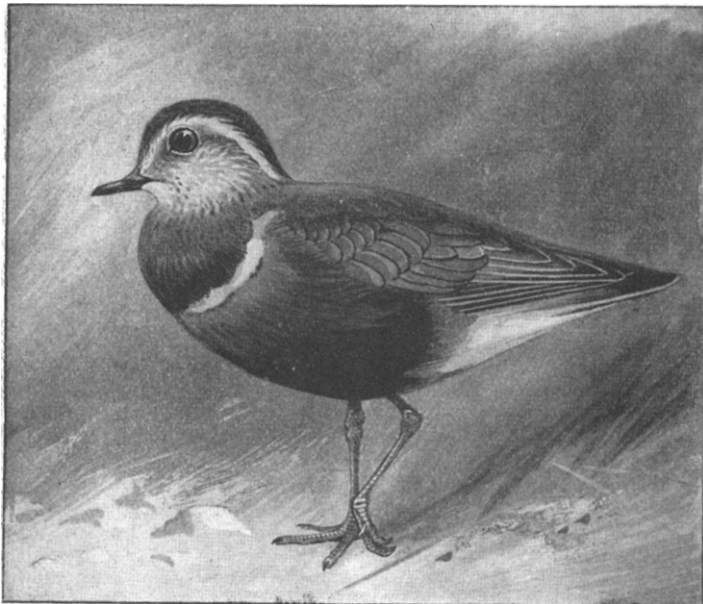


FIG. 2.—The Dotterell. (From Dixon's "Among the Birds in Northern Shires.")

have already more than enough; and the author has also seen fit to abandon the use of technical names, and to content himself with the English titles of the birds mentioned.

Much of the attraction of the book is due to the exquisite portraits of birds in their haunts from the accomplished pencil of Mr. C. Whympster. Where all are good it is difficult to select examples for special commendation, but the black-cock crowing is one that strikes our own fancy, and the two cuts that we are enabled, by the courtesy of the publishers, to reproduce, will serve as good examples of the general style of illustration. If we mistake not, the figure of the raven is very like one that has appeared elsewhere.

In the chapter on the birds of the upland streams an excellent account is given of the habits of the water-ouzel or dipper; and here the author appears, for once, to have caught Prof. Newton "tripping." In his "Dictionary of Birds" the origin of the name "dipper" is attributed by the Cambridge ornithologist to the writer of the letter-press of Bewick's "British Birds," but Mr. Dixon points

NOTES.

THE delegates to the third biennial conference in connection with the International Catalogue of Scientific Literature were entertained at dinner by the Royal Society as we went to press last week. In the course of the evening several interesting speeches were made in proposing and responding to toasts. Prof. Forsyth, in proposing "International Science," referred to the great empire of science, the possessions and achievements of which are intended for the welfare of all men. Prof. Darboux responded for France, Prof. Klein for Germany, and Prof. Weiss for Austria. The toast of "The Delegates to the Conference" was proposed by Sir John Gorst and responded to by Prof. Ciamician (Italy), Dr. Graf (Switzerland), and Dr. Brunchorst (Norway). Sir Michael Foster proposed the toast of "The Guests," which was responded to by Lord Strathcona; and the